UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/503,975	02/14/2000	Pawan Goyal	4464	7364

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EXAMINER
DONAGHUE, LARRY D

ART UNIT	PAPER NUMBER
2154	

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on th cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>06 August 2004</u>.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-56,58-90,92 and 93* is/are pending in the application.

   4a) Of the above claim(s) *7,51-56, 85-90* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-56, 58-90, 92 and 93* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All b)☐ Some * c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date *see attached*.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____ .

1.   Claims 1-56, 58-90, 92 and 93 are pr sented for examination.

2.   Applicant's election without traverse of claims 1-6, 8-50, 57-84 and 92-93 in the r ply filed on 08/06/2004 is

acknowledged.

3.   Claims 7,51-56 and 85-90 are withdrawn from further consideration.

4.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly   .
> claiming the subject matter which the applicant regards as his invention.

5.   Claims 12, 17, 23, 29, rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting

essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted

elements are:.

6.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the

rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –

> (e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent   ·
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

7.   Claims 1-6, 8-11, 37-46, 50, 58-59, 75-80, 84, 92 and 93 rejected under 35 U.S.C. 102(e) as being

anticipated by Sharma et al. (6,754,716)

        The applied reference has a common assignee with the instant application. Based upon the earlier effective

U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e)

might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the

reference was derived from the inventor of this application and is thus not the invention "by another," or by an

appropriate showing under 37 CFR 1.131.

        As to claim 1, Sharma et al. taught computer system for restricting network address-based communication

by selected processes to a set of specific network addr sses, the method comprising: associating at least one

selected process (col. 3, lines 61-66; Note a virtual d vice is a process.) with at least one network address (col. 5,

lines 20-25) ; determining whether an attempted network address-bas d communication of a sel cted process is via

an associat d address; and in response to a det rmination that the communication is via an associated addr ss, allowing the communication to proc ed (col. 2, lines 1-3).

As to claim 2, Sharma et al. taught loading at least one selected process into computer memory; and storing at least one association, between the process and at least one network address (300, fig 3; col. 5, lines 21-23, rebooting a hardware device is equivalent to loading a virtual device).

As to claim 3, Sharma et al. taught the associations between selected processes and network addresses are stored in an association table in a computer memory of the computer system (300, 308, fig 3).

As to claim 4, Sharma et al. taught the association table is stored in operating system address space (300, 308, fig 3).

As to claim 5, Sharma et al. taught a network address-based communication comprises an attempt to designate a network address to be used for subsequent communication (col. 5, lines 44-52).

As to claim 6, a network address-based communication comprises an attempt to associate a communication channel with a network address, this feature is inherit in an Internet system.

As to claim 8, Sharma et al. taught a network address-based communication comprises an attempt to establish a connection to a second process (col. 3, line 55 – col. 4, line 11).

As to claim 9, Sharma et al. taught a network address-based communication comprises an attempt to transmit data to a second process (col. 1, lines 40-63).

As to claim 10, Sharma et al. taught the second process (col. 3, lines 61-66; Note a virtual device is a process.) is executing in a computer memory of the computer system (col. 3, line 55 – col. 4, line 11).

As to claim 11, Sharma et al. taught the second process is executing in a computer memory of a second computer system (col. 3, line 55 – col. 4, line 11).

As to claims 37-40, Sharma et al. taught the operation was performed in software and that the request is terminated and no further action is taken, if the address is not authorized. Generating of code is inherent.

As to claim 41, Sharma et al. taught the set consists of one network address (col. 5,line 20-33).

As to claim 42, Sharma et al. taught the set consists of at least two network addresses (col. 5, line 20-33).

As to claim 43, Sharma et al. taught associating at least one selected process with at l ast one network address (col. 5, lines 20-32); det rmining whether an attempted network addr ss-based communication of a selected

process is via an associated address; and in response to a determination that the attempted communication is not via an associated addr ss, not allowing th attempted communication to proceed (col. 5, lin s 52-65).

As to claims 44-46, the attempt to associate a communication channel with a network address is an inherent TCP/IP protocol stack as taught by Sharma et al. .

As to claim 50, Sharma et al. taught the association between network devices and the network address, if only one address is assigned to the host it would be unique.

As to claims 58-59, 75-80 and 84, they correspond to the method claims in program code format previously addressed.

As to claim 92, Sharma et al. taught associating at least one selected process (col. 3, lines 61-66; Note a virtual device is a process.) with at least one network address (col. 5, lines 20-25) ; detecting when a selected process attempts to communicate via an unassociated address; not allowing the attempted communication to proceed (col. 2, lines 1-3) .

As to claim 93, Sharma et al. taught program code for associating at least one selected process with at least one network address (col. 5, lines 20-25); program code for detecting when a selected process (col. 3, lines 61-66; Note a virtual device is a process.) attempts to. communicate via an unassociated address; program code for not allowing the attempted communication to proceed; and a computer readable medium on which the program codes are stored (col. 2, lines 1-3).

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9.   Claims 47-49 and 81-83 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al. as applied to claims 1 above, and further in view of Official Notice.

Sharma et al. taught the invention as claimed except for the use of a wild card in the addressing, the use of a wild card is well known in art, as it allows multiple association to a single address as would conserve memory space.

Claims 12-36 and 60-74 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharma et al. as applied to claims 1-5, 58 and 59 above, and further in view of Deianov et al. (6,529,985).

As to claims 12,16, 17, 21, 24 and 32, Sharma et al. did not expressly teach modifying the software to intercept system calls to perform the enhanced features of the ARM, Deianov et al. taught this f ature and suggested it implementation for modifying softwar to p rform enhanced features.

As to claim 22, Sharma et al. taught the use of TCP/IP stack (figur 3)

As to claims 23, 28, 29 and 30, the child process would inherent the attributes of the parent therefore it would be obvious that the child process would inherent the association of the network addresses. As to claim 28, it would be obvious to store the address for future reference.

As to claim 31 and 36, it would have been obvious to one of ordinary skill in the data processing art to delete the associations to conserve memory within the operating system kernel

As to claim 13, 18, 25, and 33, Deianov et al. taught storing object code that performs the designated task ; and wherein intercepting comprises replacing a pointer to a system call with a pointer to the object code, such that calling the system call causes the object code to execute (col. 6, lines 16-35).

As to claims 14, 19, 26 and 34, Deianov et al. taught loading an interception module into computer memory, the interception module comprising the object code (col. 6, lines 16-35, figure 3).

As to claims 15, 20, 27 and 35, Deianov et al. taught the interception module is loaded into a running operating system kernel (col. 6, lines 16-35 and figure 3).

As to claims 60-74, they correspond to the method claims in program code format previously addressed, supra.
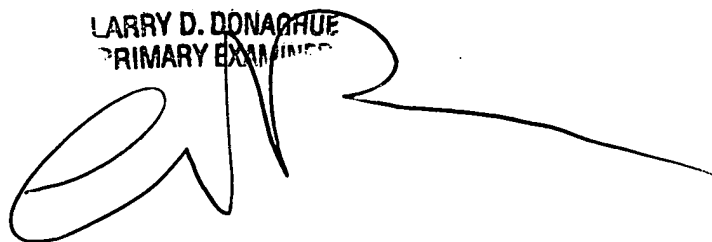
10.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Larry D Donaghue whose telephone number is 571-272-3962. The examiner can normally be reached on M-F 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Follansbee can be reached on 571-272-3964. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Cent r (EBC) at 866-217-9197.(toll-fre).

LARRY D. DONAGHUE
PRIMARY EXAMINER